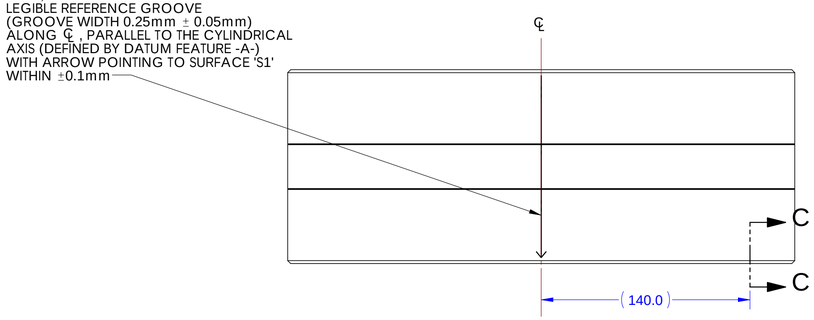
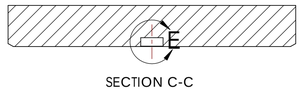
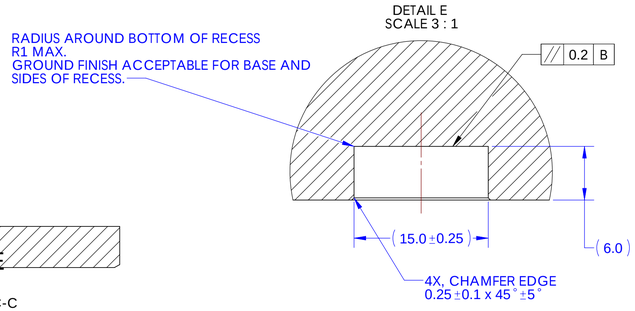
REV.	DATE	DCN #	DRAWING TREE #
A	04/2008	E080171-00-D	

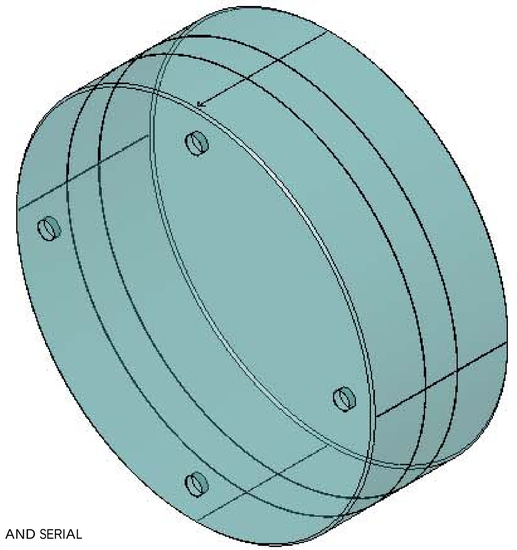
FOR PHYSICS/LIGO REFERENCE ONLY:- (REVISION HISTORY)

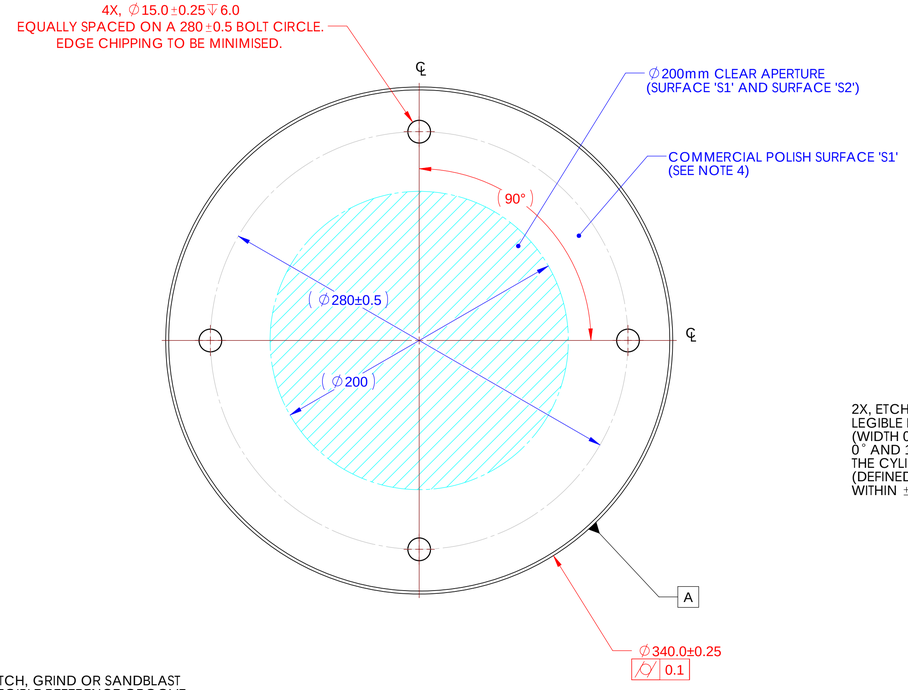
00	01/2008	INITIAL RELEASE
01	03/2008	ALTERATIONS BASED ON REVIEW BY G. BILLINGSLEY AND I. WILMUT
02	04/2008	ADDITION OF CLEAR APERTURE TO SURFACES "S1" AND "S2" FOLLOWING DISCUSSIONS BETWEEN K. STRAIN AND G. BILINGSLEY.
03	04/2008	AMMENDMENT TO MANUFACTURING NOTE 4. (K. STRAIN)

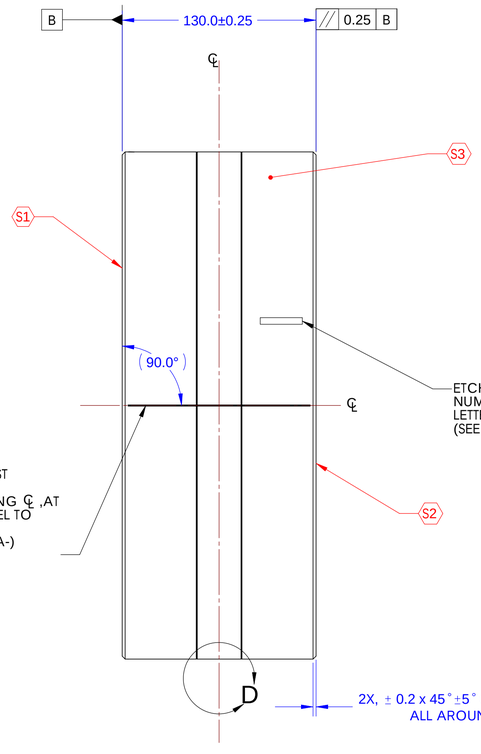






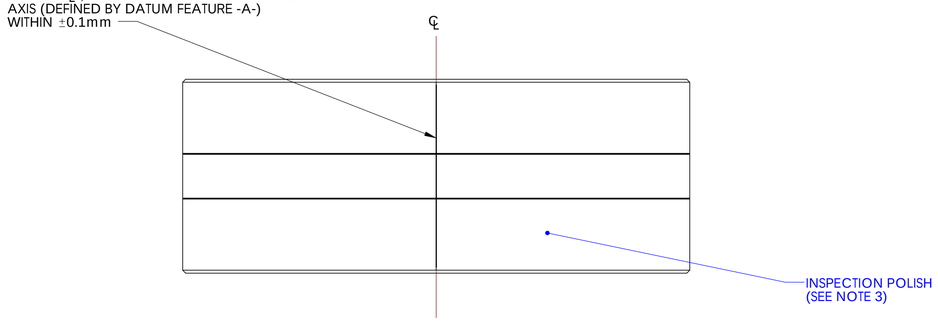


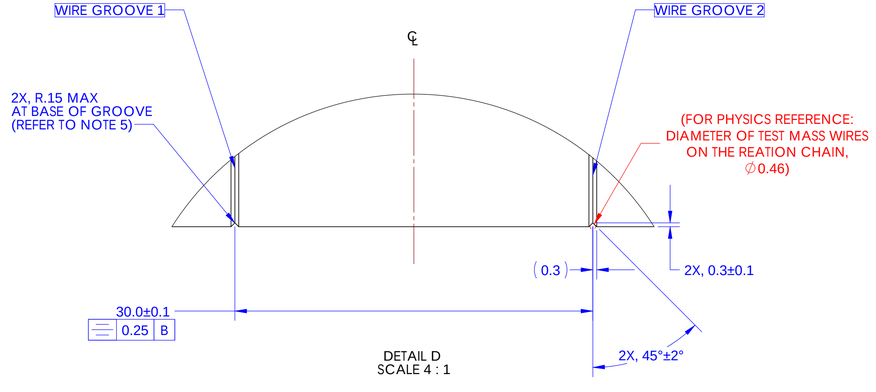




2X, ETCH, GRIND OR SANDBLAST
LEGIBLE REFERENCE GROOVE
(WIDTH 0.25mm ±0.05mm)ALONG ℄ ,AT
0° AND 180° POSITION PARALLEL TO
THE CYLINDRICAL AXIS
(DEFINED BY DATUM FEATURE -A-)
WITHIN ±0.1mm

ETCH, GRIND OR SANDBLAST PART AND SERIAL NUMBER, APPROX. WHERE SHOWN, LETTERING APPROX. 4mm HIGH (SEE NOTE 6)





DETAIL D
SCALE 4 : 1

MANUFACTURING NOTES:

1. DO NOT SCALE FROM DRAWING.

2. THIS DRAWING IS ACCOMPANIED BY LIGO COMPONENT SPECIFICATION "E080089". [REFER TO E080089 FOR MATERIAL AND INSPECTION NOTES.]

3. INSPECTION POLISH ALL FACES, EDGES AND CHAMFERS.
SURFACES SHALL APPEAR TRANSPARENT WITH NO GREY, SCUFFS OR SCRATCHES VISIBLE TO THE NAKED EYE WHEN VIEWED IN NORMAL ROOM LIGHT AGAINST A BLACK BACKGROUND.

4. SURFACE QUALITY ON SURFACE 'S1' AND WITHIN THE CLEAR APERTURE ON SURFACE 'S2' TO BE 80/50 SCRATCH/DIG (AS PER MIL-PRF-13830B)

5. WIRE GROOVES 1 and 2, SHOWN IN DETAIL 'D' ARE REQUIRED TO LOCATE TWO STEEL WIRE LOOPS(∅0.46mm). GROOVES MUST EXTEND AROUND THE FULL CIRCUMFERENCE OF THE MASS IN THE POSITIONS SHOWN.
THE SEPARATION OF THE GROOVES FROM THE CENTRE OF MASS (℄), AND EACH OTHER IS CRITICAL.
GROOVES SHOULD BE APPROXIMATELY "V-SHAPED" WITH A MAX. RADIUS OF 0.15mm AT THE BASE OF EACH GROOVE.

6. ETCH, GRIND OR SANDBLAST PART AND SERIAL NUMBER, APPROX. WHERE SHOWN, USE LETTERING APPROX. 4mm HIGH.

THE SERIAL NUMBER SHOULD BE OF THE FORMAT: D080116-YY-Z
WHERE "YY" IS INCREMENTAL FOR EACH SUBSTRATE, STARTING AT "01", AND "Z" IS THE CURRENT REVISION LETTER OF THIS SPECIFICATION.
EXAMPLES:
D080116-01-A, D080A116-02-A, ...D080116-09-A, AND SO ON.

PARTS LIST

NOTES: (UNLESS OTHERWISE SPECIFIED)
DIMENSIONS ARE IN MILLIMETERS (mm)

TOLERANCES:
X ±0.1
XX ± 0.05

ANGULAR ± 0.1 °

MATERIAL
AS PER LIGO-E080089

FINISH
SEE NOTES

	NAME	DATE
DRAWN	R.JONES	JAN08
CHECKED	I.WILMUT(RAL)	29/03/08
APPROVED		

LIGO — CALIFORNIA INSTITUTE OF TECHNOLOGY, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, IGR, GLASGOW UNIVERSITY GEO 600 GROUP

SYSTEM	ADVANCED LIGO
SUB-SYSTEM	SUS
NEXT ASSY	ETM QUAD
PART NAME	END REACTION MASS (ERM)
SIZE	D
DWG. NO.	D080116
REV.	A
SCALE: 1:2	PROJECTION:
SHEET 1 OF 1	